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that a volcano was the origin. At Santa-Marta, in New Granada, the noise was supposed to be caused by the firing of the same vessel in distress. Captain M'Quhae, who commanded the *Fly*, and who was in the harbour of Carthagená, accompanied the governor of that port in a reconnaissance, both fearing that the firing proceeded from some vessel in want of succour. The noise in that direction was heard as far as Bogotá. Everywhere the noise was supposed to proceed from the immediate vicinity.*

IV.—*Account of Lough Erne.* By Lieutenant J. Wolfe, R.N.

LOUGH ERNE lies almost entirely in the county of Fermanagh, which it traverses from one end to the other. Its limits are considered to extend from Beleek, on the N.W., to Belturbet, on the S.E., a direct distance of about thirty-five English miles; but for some distance on each side of these towns it is so narrow as merely to deserve the name of a river. It offers the greatest extent of inland navigation of any of the lakes in Ireland, though, from the number of islands with which it is studded, it does not contain the same area of water as Lough Neagh.

Its waters do not appear to possess any peculiar qualities, such as the petrifying properties of Lough Neagh, but they have a harsh unpleasant taste, and are not considered wholesome to drink. The constant use of them has been known to give fever to a regiment quartered at Enniskillen, which lost as many as three men a day. At the season of gathering the flax they are particularly unwholesome, from the quantity of that article 'drowned,' or laid to soak, along the shores.

The lake abounds in wild duck, and during the winter is visited by large flocks of wild geese. Of marine birds, the common gull and the tern are occasionally seen; also the white eagle. Along the shores may be found snipe, curlew, and plover. The varieties of fish are,—salmon, trout, pike, perch, bream, eels, herrings, roach, tench, and shads.

The lake is generally divided into the upper and lower lakes; the town of Enniskillen forming the point of separation, and nearly equidistant from either extreme.

The Lower Lake.—This is by far the largest and deepest of the

* With the above may be compared an account of the same catastrophe published in the 42nd Number (August, 1835) of the *Nautical Magazine*. The facts stated are nearly the same in both. His Majesty's ship *Conway*, cruising at the time in the Pacific, in lat. 7° N., long. 105° W., met with the same clouds of dust, apparently of pumice, with many fragments of the stone also floating, through a space of nearly forty miles from north to south.

two, and might be navigated by vessels of 200 tons burden from a mile below Enniskillen to Rosscor Island. For about seven miles below the town it is thickly covered with islands; it then opens out into a wider expanse, and at its greatest width is five English miles from shore to shore. The coasts present a striking uniformity of appearance, consisting of a stony beach, (backed by low earthy cliffs,) with large masses of rock lying on it, and extending from fifteen to twenty yards from it. This circumstance arises from the winds, which, when the water is high, in winter, generally reaches the cliffs, and causes the waves to wear them away, leaving or carrying away the detached masses of stone, according as they are more or less ponderous. In many instances there were pointed out to me places where, within the memory of the present inhabitants, the shores had lost from eighteen to twenty feet; and islets are now entirely under water in the winter, on which once stood private stills for the manufacture of 'potyeen.' In consequence, landing is not only difficult but dangerous to boats.

The general features of the shores are rounded hills of moderate elevation; towards the bottom of the lake, however, on the southern side, is a range of table-land, called the Poola Fooka Mountain, which rises to the height of about 900 feet above its level, overhangs its shores, to which it descends with considerable abruptness, and offers the only imposing feature on the lake; when seen under particular lights it may be considered rather a grand object. The hills are chiefly composed of limestone, and in Carracreagh Bay quarries are worked to a great extent. It is here so compact as to take a good polish, bearing the appearance of black marble, and is very much used for chimney pieces, and other architectural ornaments. Towards Enniskillen, on the northern shores, and on some of the islands, veins of rather a fine sandstone are found; while among the debris on the beach may be seen crystals of quartz, carbonate of lime, and occasionally pieces of micaceous schist. In the limestone are found fossils, principally of shells and coral formations. Below the Boe Island, the northern shores present a dreary and barren prospect of bare limestone hills and mountain bog.

The elevation of the lake, at the lowest to which it has been known to subside during the last three years that a register has been kept, is about 148 feet above the low-water level of the sea; and its greatest rise, during the above period, has been eight feet. This, of course, causes a very great difference in the winter and summer outlines of its shores; peninsulas being isolated, islands covered and made dangerous shoals, and where the coasts are low, many acres of pasture land entirely lost. The bottom, though generally of blue or yellow clay, is singularly irregular, frequent variations of twenty to thirty feet in depth occurring in the dis-

tance of almost as many yards. In the broad lake is an instance of one of these sudden rises from 150 feet to a gravel bed with only twenty-eight feet over it. The deepest water lies along the shores of Magho, near the commencement of the Poola Fooka range, where I found 228 feet. In this deep water the temperature at the bottom was proved, by several experiments, not to differ from that of the surface. The velocity of the current, at the bridge of Enniskillen, is about two and a half miles an hour, at its greatest; but although there must be throughout the whole lake a drainage downwards, it is imperceptible in the broad lake.

The shores of the lake are very thinly peopled, and not a single village is to be seen along the whole extent of its borders. The nearest are Churchill, on the southern side, about half a mile inland, and Kish and Pettigo, to the northward, each of which is about a mile from the shore. With the exception of the latter, which contains a population of about 300 souls, these miserable collections of a few wretched hovels scarcely even deserve the name of village. In consequence of a new line of road avoiding Churchill, that place is becoming entirely deserted, so that from Enniskillen to Beleek, a distance of twenty-three miles, there is not a single village. The principal article to be procured at those places, and which can be obtained at almost every cabin, is whisky.

On the southern shore no river empties itself into the lake, but to the northward are the Ballicassidy, Kish, Baunagh, and Terman or Pettigo rivers. Of these only the Ballicassidy and Baunagh may be considered navigable, even for small vessels; and in summer they are greatly impeded by bars. The country abounds in springs, and there are several spa wells near the coast.

There are four ruins of ancient castles, formerly belonging to chiefs of tribes; that of Purtora, about a mile below Enniskillen, the seat of the Maguires; Tully, about half-way down, on the southern coast, the seat of the Humes; Crevnish, in Kish Bay, the seat of the Blennerhassets; and Terman, near the Pettigo Waterfoot, the seat of the Magraths, and famous as the residence of Terman Magrath, the first Irish reformed bishop. These remains all bear exactly the same character and form, being built of rough stones of all sizes, the cement of which is nearly as hard as the stone itself, of a quadrangular form, with round or square towers at each angle. Terman castle remained in good preservation till within the last few years, when it was greatly destroyed for materials to build a glebe house. On the island of Devenish, about a mile and a half below Enniskillen, is one of those monuments of Irish antiquity, the "Round Towers," in very excellent preservation, its progress towards decay having been stopped by repairs done to it this year, by subscription of the neighbouring gentry. On the cornice, outside the tower, immediately below

the cone which crowns it, are four heads, carved in stone, facing the cardinal points; those exposed to the prevailing northerly and westerly winds are very much obliterated, but the others still exhibit the marks of the chisel, and are carved with considerable sharpness and skill. They are about the size of life, and are remarkable from the singular manner of plaiting the beard. The ornamental work round the cornice is also worthy of notice, and is different between every two heads. The height of this tower is eighty-one feet ten inches.

Near this tower are the remains of an abbey which appear to be of a later date; they have suffered much from the stones being carried away for building in the town of Enniskillen. The masonry is rude, and the most remarkable point about it is the beauty of the arches, the sharpness with which they are cut, and their being of a different stone from the rest of the building. Among the tomb-stones are several with armorial bearings; and many are still buried in this once sacred place.

The boats on the lake are termed "cots;" they are of the most primitive construction, flat bottomed and square at each end, drawing very little water, and rigged with one large gaff sail. The largest are about thirty-six feet in length, and are capable of carrying from ten to twelve tons. They are not in the least adapted for making any progress against the wind, and are therefore obliged in adverse winds or bad weather to seek shelter under the lee of some of the islands, where they are drawn close to the shore, and frequently lie for days together. Latterly, however, a superior sort of vessel has been introduced on the lake more resembling the English build, but these are generally so badly found and managed, that, although capable of carrying a greater burden, they make but little better progress than the cots. The chief occupation of these boats is the supplying Enniskillen with turf, stones, gravel, and sand for building, which are procured on the shores of the lake; with, occasionally, a freight of slates or coal from Beleek, brought by land-carriage from Ballyshannon.

The portion of the county Donegal which touches the lake is a mere point between the Pettigo river and a small stream called the Letter, which two streams meet on emptying themselves into the lake.

On the southern shores there is very little bog land, but to the northward are large tracts lying very convenient to the shores, and from these, more especially about Portanode and Ross-harbour, the town of Enniskillen is chiefly supplied. As no coal is found in the country, these bogs, though contributing nothing to its beauty, are of the utmost importance, as they afford the only fuel of turf and bogwood.

The round tower of Devenish is the only one in Fermanagh,

indeed they are very rare throughout all the north of Ireland, but around the lake there is scarcely a hill which is not crowned by a Danish fort. These are simply circular enclosures from forty to fifty yards in diameter, with a trench dug round them, and the bank planted with tress. From their number and conspicuous appearance, they form a very remarkable feature in the country.

It is generally supposed that strong winds along the axis of the lake set the water up in that direction to a very considerable degree, yet the very slight difference shown by four different registers, at an extreme distance of about eighteen miles, during seven months, was only such as may and must be attributed (since they do not always vary the same way) to errors of observation. Doubts had arisen as to the lake preserving its level, and a series of observations were entered into by the officers of the Ordnance Survey, determining the elevation of several points from the lake, which, when compared with those deduced immediately from the sea, and totally unconnected with the lake, were found to agree very nearly.

On viewing this extensive sheet of inland water, the natural reflection arises of the great advantages it must afford to the commerce of this part of the country by the facility it affords of water-communication; but the present survey shows that the full benefit of such intercourse is much curtailed from its being in many places generally shallow and full of rocks. At Ardees Bay, two miles above Rosscor Island, where the lake may be said to terminate, the navigation becomes intricate and almost impracticable even to the cots. The River Erne has in many places not more than three and a half to four feet water in summer, and at about two miles above Beleek it is almost entirely obstructed by an eel weir, which has caused a great accumulation of gravel, except in the narrow passage between it and the north bank, through which the current sweeps with great violence. The whole of the space at the back of the Boe Island is full of detached shoals, rocks, and sand-banks, running off from the shores, and the access to it is in summer difficult, as both entrances are narrow and shallow. From Ardees Bay, however, there is an uninterrupted space of twenty-one miles, which may be navigated by vessels of two to three hundred tons; here a difficulty occurs, at about a mile and a half below Enniskillen, in the Friars Leap, a narrow channel between two rocks, in which there is only six feet at low water. The Purtora Passage also, immediately communicating with the town, has a bar of only four feet across it. These are the only impediments to the free navigation of the lake, and on both sides are good anchorages.

The great object is an outlet for the produce of the adjacent country, which is naturally sought for in the harbour of Bally-

shannon. Without, however, entering into its capabilities as a port, or the probability of success in the operations now carrying on, it appears that a great error is committed in considering Beleek as the point of trans-shipment, whereas the difficulties above mentioned between that place and Ardees Bay are such as to make it well worth continuing the land carriages two miles further to the latter point. But a still more eligible point of embarkation seems to offer in the Bay of Bleana Lung, to the northward of Castle Caldwell, where the natural advantages of security of anchorage, depth of water, good shores, and free access, are much greater, while the distance from Ballyshannon is somewhat less. Another important consideration is, that from this point the distance to Donegal is not much greater than to Ballyshannon, thus offering another channel for the exports of the country; but it must be observed, that the intervening country between Donegal and Bleana Lung being hilly, some expense must be incurred in perfecting the communication. A very excellent road is now in a state of forwardness between Pettigo and Donegal, passing within about half a mile of the shores of the lake; but the objections to the back of the Boe Island have already been stated. There are, indeed, but few eligible points for embarkation, either for goods or passengers, along the whole course of the lake, as the shores generally run off so flat. Benmore and Carracreagh Bays to the southward, and Gublusk Bay to the northward, may be mentioned as the most convenient landing-places in connexion with the high roads, in short, as fitting spots for the sites of villages.

Abstract of the Weather.

Dates.		Direction.				Force.				Rain.
Months.	Days.	Between N. & W.	Between N. & E.	Between S. & W.	Between S. & E.	Strong.	Moderate.	Light.	Calm.	
April ..	30	14	10	4	2	19	8	2	1	17
May * ..	14	5	4	3	2	5	8	..	1	9
June ...	30	21	5	2	2	14	9	7	..	10
July ...	31	13	8	3	7	19	7	4	1	19
August.	31	10	9	2	10	11	13	5	2	9
Septem.	30	16	11	..	3	22	7	1	..	22
October	31	14	10	5	2	17	13	1	..	22

* Employed getting the cutter from Ballyshannon during the latter part of this month, and had no opportunity of registering meteorological observations.

Register of the Height of Water in Lower Lough Erne above a Zero, 148 ft. 4 in. above Low Water of the Sea—Spring-tides.

Months,	1833.		1834.		1835.	
	Max.	Min.	Max.	Min.	Max.	Min.
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
January .		4 3	7 8	6 4	5 0	3 0
February	5 0	4 0	5 11	4 9	5 6	4 3
March .	4 11	3 3	4 8	3 5	6 9	4 9
April . .	3 5	2 9	3 4	1 7	4 6	2 0
May . .	2 7	1 7	1 6	1 2	3 1	1 8
June . .	1 6	1 2	1 5	9	3 0	1 6
July . .	1 7	1 6	2 5	1 2	2 3	1 4
August .	1 5	9	2 4	1 9	1 9	9
September	1 9	5	1 11	1 6	1 11	6
October .	2 9	1 11	2 9	1 10	3 2	1 10
November	5 3	3 2	3 9	2 7		
December	7 11	6 0	3 8	2 9		

The zero was placed at the above level in August, 1832; the lake then standing at that elevation, to which, however, it has never since fallen, as shown by the above Register.

V.—Extracts from Commander Moresby's Report on the Northern Atolls of the Maldivas. Communicated by the Geographical Society of Bombay.

MILLADOUE MADOUÉ extends from latitude $6^{\circ} 30' 30''$ N. to $5^{\circ} 39' 39''$ N., and from $72^{\circ} 57' 15''$ to $73^{\circ} 29' 42''$ East longitude from Greenwich. Taking the length of the Atoll in a diagonal direction, S. 25° E., it is fifty-eight miles long, and its greatest breadth is twenty miles. It contains one hundred and one islands, twenty-nine of which are inhabited, and support a population of between seventeen hundred and eighteen hundred souls. The islands are most numerous on the E. or S. E. part of the Atoll; the western side having few islands, but more reefs. Broad and safe channels, from one to two miles in width, are found between all the islands, and no barrier reef connects them. The inner part of the Atoll has few islands, except on the southern side; and is so clear from dangerous reefs, that a ship might navigate through this Atoll at night, having regular soundings from twenty to twenty-five